

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-13 (Canceled)

Claim 14 (Original) A method of immunizing an individual to prevent disease caused by a gram negative pathogen, comprising vaccinating the individual with a prophylactically effective amount of vaccine formulation comprising an antigenic conjugate comprising a carrier protein covalently bonded to the conserved portion of a lipopolysaccharide of a gram negative bacteria, wherein said conserved portion of the lipopolysaccharide comprises the inner core and lipid A portions of said lipopolysaccharide, said conjugate eliciting a cross reactive immune response against heterologous strains of said gram negative bacteria.

Claim 15 (Original) A method as in claim 14, wherein the vaccine formulation is administered to said individual by a route of administration selected from the group consisting of intradermal, intramuscular, intraperitoneal, intravenous, vaginal, subcutaneous, ocular, intranasal, and oral administration.

Claim 16 (Original) A method as in claim 14, wherein said vaccine formulation further comprises a physiological carrier and an adjuvant.

Claim 17 (Original) A method for preventing bacterial sepsis in a mammal in need thereof, comprising administering an effective amount of a formulation comprising an antigenic conjugate comprising a carrier protein covalently bonded to the conserved portion of a lipopolysaccharide of a gram negative bacteria, wherein said

Amendments to the Claims (Continued)

conserved portion of the lipopolysaccharide comprises the inner core and lipid A portions of said lipopolysaccharide, said conjugate eliciting a cross reactive immune response against heterologous strains of said gram negative bacterial organisms.

Claim 18 (Original) A method for preventing bacterial sepsis in a mammal in need thereof, comprising administering an effective amount of a formulation comprising an antigenic conjugate comprising a carrier protein covalently bonded to the conserved portion of a lipopolysaccharide of a gram negative bacteria, wherein said conserved portion of the lipopolysaccharide comprises the inner core and lipid A portions of said lipopolysaccharide, said conjugate eliciting a cross reactive immune response against heterologous genera of gram negative bacterial organisms.

Claim 19 (New) An antigenic conjugate comprising a carrier protein covalently bonded to the conserved portion of a lipopolysaccharide (LPS) of a gram negative bacterium selected from the group consisting of *Neisseria gonorrhoeae*, *Haemophilus influenzae*, *non-typable Haemophilus influenzae*, *Haemophilus ducreyi*, *Helicobacter pylori*, *Escherichia coli*, *Chlamydia*, *Salmonella*, *Salmonella typhimurium*, *Salmonella Minnesota*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Moraxella catarrhalis*, *Bordetella pertussis*, *Shigella*, *Klebsiella* and *Vibrio cholera*, wherein the

Amendments to the Claims (Continued)

- conserved portion of the LPS comprises GlcNAc-Hep2-phosphoethanolamine-KDO₂-LipidA, wherein the conjugate elicits a cross protective immune response against heterologous strains of the gram negative bacteria.
- Claim 20 (New) The antigenic conjugate of claim 19, wherein the LPS is de-O-acylated.
- Claim 21 (New) The antigenic conjugate of claim 19, wherein the carrier protein is selected from the group consisting of tetanus toxin or toxoid, Group A streptococcal toxins, pneumolysin of *Streptococcus pneumoniae*, filamentous haemagglutinin (FHA), FHA fragments of *Bordetella pertussis*; pili or pilins of *Neisseria gonorrhoeae*, pili or pilins of *Neisseria meningitidis*; outer membrane proteins of *Neisseria meningitidis*, outer membrane proteins of *Neisseria gonorrhoeae*; C5A peptidase of *Streptococcus* and surface protein of *Moraxella catarrhalis*.
- Claim 22 (New) The antigenic conjugate of claim 19, wherein the carrier protein is linked the conserved portion of the LPS with a compound selected from the group consisting of Sulfosuccinimidyl-6-(3-[2-pyridyldithio]propionamido)-hexanoate (Sulfo-LC-SPDP); succinimidyl-6-(3-[2-pyridyldithio]propionamido)-hexanoate (LC-SPDP); Traut's reagent (2-iminothiolane); N-succinimyl-S-acetyl thioacetate (SATA); N-Succinimidyl-3-(2-pyridyl dithio)propionate (SPDP), succinimidyl acetyl thiopropionate SATP), succinimidyl-4-(N-maleimido methyl)cyclohexane-1-carboxylate (SMCC), maleimido benzoyl-N-hydroxy succinimide ester (MBS), N-succinimidyl (4-iodoacetyl)aminobenzoate (SIAB), succinimidyl 4-(p-maleimidophenyl)butyrate (SMPB), bromoacetic acid-N-hydroxy succinimide (BANS) ester, 1-ethyl-

Amendments to the Claims (Continued)

3-(3-dimethylamino propyl) carbodiimide (EDAC), adipic acid dihydrazide (ADH), cystamine and dithiobis(succinimidyl propionate) (DTSSP).

Claim 23 (New) An immunogenic composition comprising an effective amount of the antigenic conjugate of claim 19.